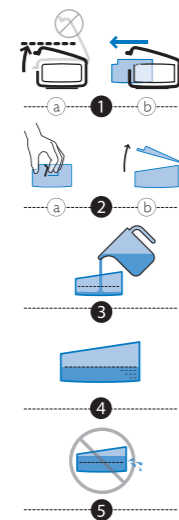




4 Humidification



With device turned off, remove and fill chamber with water.

- (a) Lift humidifier door until it locks in place. Do not force door higher than the locked position. (b) Grasp front of chamber and slide toward you.
- (a) Gently push tab located inside round opening on top of chamber. (b) Separate top and bottom of chamber.
- Fill bottom chamber with distilled water.
- Observe maximum fill lines located on sides of chamber.
- Do not overfill. Reassemble the chamber by placing the hinges on lid over the two tabs on back of chamber. Close lid until it locks in place with an audible click. Insert filled chamber into humidifier.

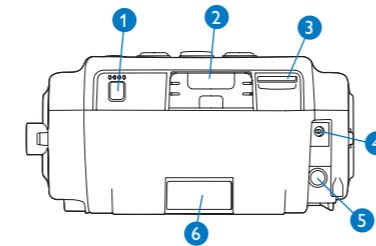
On the Standby screen, if a humidifier is connected, you can select **Preheat** so humidifier preheats before therapy is delivered.

Undocking the humidifier

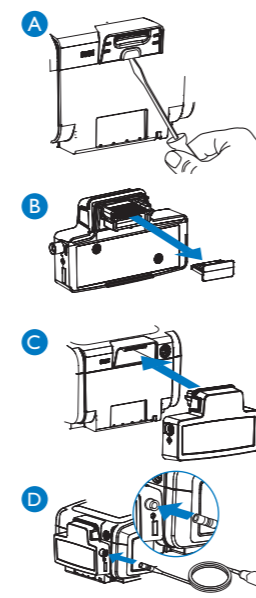


5 Connection to oximetry

Back of device



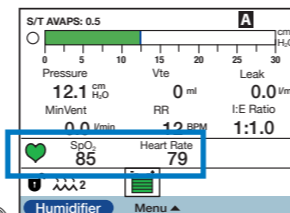
- Nurse call connector
- Accessory slot (cover shown)
- SD card slot
- DC power inlet
- AC power inlet
- Filter area



To plug the oximetry module:

- Remove the cover from the accessory slot at the back of the BiPAP A30.
- Remove the cover from the oximetry accessory.
- Plug the oximetry accessory into the accessory slot.
- Plug the oximetry sensor of your choice to the oximetry module.

When the oximetry module is connected, the SpO₂ and heart rate values are monitored on the main screen (see below).



6 Guidelines for ventilation set-up

Initial settings	IPAP = 8 to 10 cmH ₂ O, EPAP = 4 cmH ₂ O and RR = 10 to 12 BPM		
IPAP	Increase IPAP if the patient wants more air, targeting patient tidal volume at 8 ml/Kg of ideal weight		
EPAP	<ul style="list-style-type: none"> without SAS: 4 – 5 cmH₂O with SAS: increase EPAP to remove obstructive apnea events with intrinsic PEP (stable chronic COPD): 5 – 6 cmH₂O 		
BPM	Set to 2 – 3 BPM under patient's spontaneous frequency		
Rise time	Obstructive patients prefer short rise time: from 1 to 4 (100 ms to 400 ms) Restrictive patients prefer long rise time: from 3 to 6 (300 ms to 600 ms)		
Ti	Set Ti between 25% and 33% for obstructive patients Set Ti between 33% and 50% for restrictive patients (refer to table opposite)		

	OHS	COPD	Other restrictive diseases (NMD, etc.)
Vt target	8 to 10 ml/kg of ideal body weight (refer to table opposite)		
IPAP window (IPAPmin and IPAPmax)	Allow a wide range of pressure variation to ensure the right pressure at the right time. • IPAPmin = EPAP • IPAPmax = 25 – 30 cmH ₂ O	Allow a more restrictive pressure window to combine comfort and efficacy. • IPAPmin = comfortable IPAP • IPAPmax = IPAPmin + 5	Allow a more restrictive pressure window to combine comfort and safety. • IPAPmin = efficient IPAP • IPAPmax = IPAPmin + 5
AVAPS rate	AVAPS rate setting depends on patient needs and clinical condition: 0.5 cmH ₂ O/min to 3 cmH ₂ O/min so target tidal volume is reached smoothly 3 cmH ₂ O/min to 5 cmH ₂ O/min so target tidal volume is reached more rapidly		

Check patient arterial blood gases (PaCO₂ and PaO₂) and oxygen saturation (SpO₂)

Important: Guidelines are intended to serve only as a reference. They shall be used only in conjunction with the instructions and/or protocol set forth by the physician and institution in which the assist device is being used. The guidelines are not intended to supersede established medical protocols.

Conversion table to set the inspiratory time for controlled breaths

Set back up breath rate (BPM)	I/E 1/3, Ti/Ttot 25%	I/E 1/2, Ti/Ttot 33%	I/E 1/1, Ti/Ttot 50%
10	1.5 s	2.0 s	3.0 s
11	1.4 s	1.8 s	2.7 s
12	1.3 s	1.7 s	2.5 s
13	1.2 s	1.5 s	2.3 s
14	1.1 s	1.4 s	2.1 s
15	1.0 s	1.3 s	2.0 s
16	0.9 s	1.3 s	1.8 s
17	0.9 s	1.2 s	1.7 s
18	0.8 s	1.1 s	1.6 s
19	0.8 s	1.1 s	1.5 s
20	0.8 s	1.0 s	1.5 s
21	0.7 s	1.0 s	1.4 s
22	0.7 s	0.9 s	1.3 s
23	0.7 s	0.9 s	1.3 s
24	0.6 s	0.8 s	1.2 s
25	0.6 s	0.8 s	1.2 s

Set the inspiratory time in seconds: Ti (Second) = 60/Respiratory rate x % Ti

Conversion table to set the target tidal volume in relation to the ideal weight

Height	Calculated ideal weight (if BMI = 23)	Target Vte if 8 ml/kg	Target Vte if 10 ml/kg
1.50 m	52.0 kg	410 ml	520 ml
1.55 m	55.0 kg	440 ml	550 ml
1.60 m	59.0 kg	470 ml	590 ml
1.65 m	62.5 kg	500 ml	620 ml
1.70 m	66.5 kg	530 ml	660 ml
1.75 m	70.5 kg	560 ml	700 ml
1.80 m	74.5 kg	600 ml	740 ml
1.85 m	78.5 kg	630 ml	780 ml
1.90 m	83.0 kg	660 ml	830 ml

Calculated with an ideal Body Mass Index of 23 kg/m² (BMI = weight/height²)

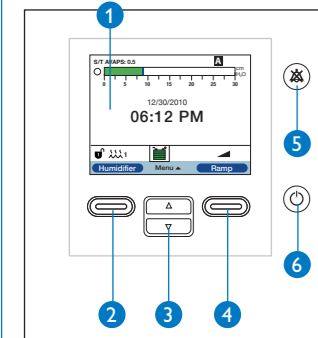


Set-up guide

- Getting started
- Main screen
- Menus
- Humidification
- Connection to oximetry
- Guidelines for ventilation set-up

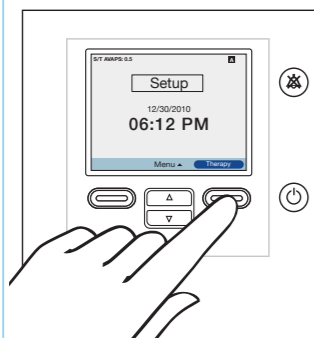
1 Getting started

Device navigation



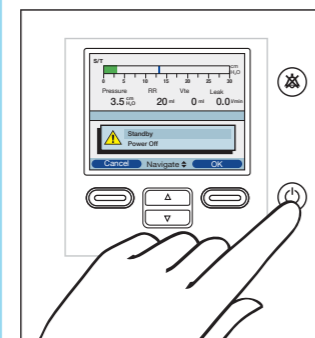
- 1 Display screen
- 2 Perform action specified on screen (humidifier setting, cancel action or exit menu)
- 3 Navigate menus or change settings
- 4 Perform action specified on screen (activate ramp, select/modify/confirm parameters)
- 5 Audio pause button
- 6 Start/stop button

How to start therapy



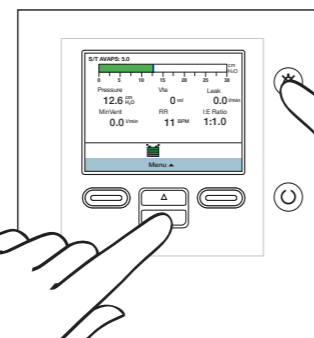
- Connect the device to AC or DC power source
- Press to switch on the device
- Select **Therapy** to start the treatment

How to stop



- Press
- To keep power on but stop the blower, select 'Standby'
- Then select **OK**
- To turn power off, select 'Power Off'
- Then select **OK**

How to unlock



- To unlock the device
- Press and hold and for a few seconds to access Setup page
 - Scroll down and select 'Options'
 - Modify 'Menu access' from 'Limited' to 'Full'
 - Press **OK** to validate
 - Press **Finish** and **Exit** to come back to the main screen
- When appears on the main screen, the device is unlocked.

2 Main screen

Mode of ventilation: S/T AVAPS: 0.5

Breath indicator (patient or machine settable in Options)

AVAPS activated with a speed rate of 0.5 cmH₂O/min.

Pressure bar graph

Real-time monitored values when detailed view ON (Options settings)

Device unlocked

Humidifier connected, setting 1

SD Card inserted

External battery connected and in use

Symbols and icons

- | | |
|--|---|
| Apnea alarm enabled | FLEX FLEX enabled |
| Audio pause is active | FLEX:1 FLEX enabled and FLEX setting (eg. 1) |
| Circuit disconnect alarm enabled | Humidifier connected and Humidifier setting (eg. 1) |
| External battery is 80% capacity | Bad humidifier state (flashing symbol displays) |
| External battery is 20% capacity | Ramp activated |
| External battery has less than 10 minutes left | SD Card error (bad memory card inserted) |
| External battery is empty | |

3 Menus

Menu: Settings and alarms

Mode	CPAP, S, S/T, PC, T
Flex Lock (only in S mode)	On (patient cannot adjust Flex level) Off (patient can adjust Flex level)
Flex (only in S mode)	Off/1/2/3
AVAPS	On/off
AVAPS rate	From 0.5 cmH ₂ O/min up to 5 cmH ₂ O/min per 0.5 cmH ₂ O/min step
Tidal volume (only when AVAPS is enabled)	200 - 1500 ml per 10 ml step
IPAP max (only when AVAPS is enabled)	IPAPmin - 30 cmH ₂ O per 0.5 cmH ₂ O step
IPAP min (only when AVAPS is enabled)	4 - IPAPmax per 0.5 cmH ₂ O step
EPAP	4 - 25 cmH ₂ O per 0.5 cmH ₂ O step
Breath rate	0 to 40 bpm (4-40 bpm for T mode)
Inspiratory time	0.5 to 3 sec. per 0.1 sec. step
Rise time lock	On (patient cannot adjust rise time) /Off (patient can adjust rise time)
Rise time	1 (fastest) to 6 (slowest)
Ramp length	0 to 45 minutes per 5 minutes step
Ramp start pressure	From 4 cmH ₂ O to prescribed EPAP per 1 cmH ₂ O step
System One humidification	On (System One humidity control)/ Off (classic mode)
Humidifier	1 (coolest) to 5 (hottest)

Menu: Settings and alarms (cont.)

Tubing type lock	On (patient cannot adjust tubing size diameter)/Off (patient can adjust tubing size diameter)
Tubing type	15 mm/22 mm
System One resistance lock	On (patient cannot set mask type)/ Off (patient can set mask type)
System One resistance (mask type)	0, X1, X2, X3, X4 or X5
Circuit disconnect alarm	Off; 15 or 60 sec.
Apnea alarm	Off; 10, 20 or 30 sec.
Low tidal volume alarm (only when AVAPS is enabled)	On/off
Low minute ventilation alarm	Off; 1 to 99 lpm
High respiratory rate alarm	Off; 4 to 60 BPM

Menu: Alarm and Event Logs

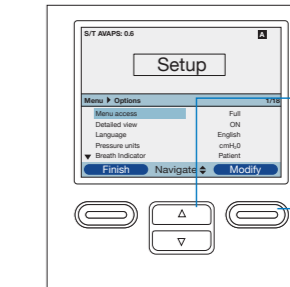
Alarm Log

The **alarm log** lists the 20 most recent alarms or messages that appeared on the device display.

Event Log

The **event log** displays a list of all events that have occurred, in chronological order.

Menu: Options



- To navigate through the Options menu:
- Use to scroll through the menu.
 - Use the left and right buttons to perform the actions specified on the on-screen buttons and set according to your preference.

Under 'Options', you have access to the following parameters:

Menu access	Full (device unlocked)/Limited (device locked)
Detailed view	On (monitored data appear on the main screen)/Off (no monitored data on screen, but time and date)
Language	You have the choice between 22 different languages
Pressure units	cmH ₂ O/hPa
Breath indicator	Patient (spontaneous breath) /machine (controlled breath)
Keypad lock	On (buttons are inactive)/off (buttons are active)
Keypad backlight	On/off
LCD brightness	1 (darkest) to 10 (lightest)
Screen saver	Dim (backlight is decreased)/Breath (black screen, but manometer and breath indicator are visible)/ Off (no screen saver)
Date & time format	Date and time settings
Blower hours	Number of hours the blower has been active (resettable)
Therapy hours	Number of hours the patient receives therapy (resettable)